APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/347,110	07/02/1999	MICHAEL P. WELLMAN	TDYNP001	3364

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EXAMINER
ABDI, KAMBIZ

ART UNIT	PAPER NUMBER
3621	

DATE MAILED: 02/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 December 2003</u>.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,10-16,18,19 and 21-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-15* is/are allowed.

6)☒ Claim(s) *16, 18-19, and 21-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   The text of those sections of Title 35,U.S.Code not included in this section can be found in the

prior office action.

2.   The prior office actions are incorporated herein by reference. In particular, the observations with

respect to claim language, and response to previously presented arguments.

- Claims 1, 16, 24, 27, and 28 have been amended.

- Claims 9, 17, and 20 have been canceled.

- Claims 1-8, 10-16, 18-19, and 21-30 are pending.

Response to Arguments

3.   Applicant's arguments filed 3 December 2003 have been fully considered but they are not

persuasive.

4.   Examiner would like to draw the attention of the applicant to the U.S.C. 101 rejection previously

presented in the office action dated 14 July 2003. The amended claims as they have been presented

currently in the application do not overcome the rejections under U.S.C. 101 reject because the claimed

invention is directed to non-statutory subject matter.

5.   Previous argument is maintained by the examiner as that the bids are generated by the Luke are

based on attributes. The point of the contention that has been raised in the most recent arguments by the

applicant has been the issue of the Luke's value is not representative of a price. At this point the

examiner does not agree with the applicant. Examiner stresses that Luke's value could have been easily

drive from attributes which one is price and the point in space that Luke is calculating could be

representing a price for a bid. Luke discloses that each bid has a price associated therewith, the price

being expressed in terms of the uniform measurement unit (col. 6, lines 60-66).

6.   Therefore, the rejections of the claimed invention as they have been presented in their current

claims form stands.

Claim Rejections - 35 USC § 101

7.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title.

8.   Claims 1-8, 10-16, 18-19, and 21-30 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

9.   The claims as presently claimed and best understood by the examiner were considered in light of the new "Examination Guidelines for Computer-Related Inventions" and were found to be non-statutory. Discussion of the analysis of the claims under the guidelines follows.

10.   The specification has been reviewed to see if the disclosed invention is in the technological art and that it has a practical use in the art. The review shows that the system uses a computerized method or system to match bidders with the sellers of goods online.

11.   It is noted that method claims 1, 16, and 24 fail to recite/define a computer, machine or device that would render the claims in the technological arts and in statutory status.

12.   Furthermore, as for claims 1, 16, and 24, the invention, as defined by the claims and as best understood by the examiner merely manipulate an abstract idea or perform a purely mathematical algorithm without any limitation to a practical application in the technological arts. However, the claimed invention manipulates data representing attributes and conditions, which are abstract and non-limiting. The invention does not require physical acts to be performed outside the computer independent of and following the steps to be performed by the programmed computer, where those acts involve the manipulation of tangible physical objects and results in the object having a different physical attribute or structure. See Diamond v. Diehr, 450 US at 187, 209 USPQ at 8. The steps of computer processing data related to attributes and conditions do not impose independent limitations on the scope of the claims beyond those required by the mathematical operation and abstract limitations because the attributes represented by symbols and conditions, which are purely abstract are not actually measured values of physical phenomena. In re Galnovatch, 595 F. 2nd at 41 n.7, 201 USPQ at 145 n.7; In re Sarker, 588 F.2nd at 1331, 200 USPQ at 135. The steps of "matching" have no direct effect on the physical world outside the computer. Thus, the claimed invention merely associates certain data with certain other data

(attributes and conditions) and performs a mathematical algorithm without any limitation to a practical

application as a result of the algorithm or outcome and is therefore deemed to be non-statutory.

13.   Claims 2-8, 10-15, 18-19, 20-23, and 24-30 are rejected as being dependent claims to above

mentioned claims that have been rejected under 35 U.S.C. 101. Same rejection rational is applied for

rejecting these claims.

Claim Rejections - 35 USC § 103

14.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as
> set forth in section 102 of this title, if the differences between the subject matter sought to be
> patented and the prior art are such that the subject matter as a whole would have been obvious
> at the time the invention was made to a person having ordinary skill in the art to which said
> subject matter pertains. Patentability shall not be negatived by the manner in which the invention
> was made.

15.   Claims 1-8, 10-16, 18-19, and 21-30 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Luke et al in view of Buss et al.

Re claims 1 and 16:

16.   Luke et al disclose a method for automatically matching buyers and sellers in electronic market

transactions such that Applicant's step of selecting a pair of bids reads on column 6, lines 12 – 19 and

figure 2C. While Luke et al do not explicitly teach selecting based on the pair having the highest surplus,

Luke et al does teach various conditions for matching. Applicant's claimed method of selecting based on

highest surplus is considered to be old and well known; e.g., one scenario is that the credit standing

required by the seller is minimal, however there are two buyers; one with an average credit standing and

the other with an excellent credit standing. It would be most advantageous to the seller to choose the

buyer with the excellent credit standing (highest surplus) as there is a better chance of the sale going

through without any difficulties as opposed to choosing the buyer with the average credit standing.

Further, in figure 2c and columns 8 and 9, lines 14 – 20 and 1 – 8, respectively, Luke discloses that the

solicitations which fall in any levels 205, 206 and 207 are listed and supplied to the originator; the near

matches (level 207) are what Applicant is referring to as "surplus" matches. Therefore, it is considered

that it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize any

criteria desired for considering a buyer and seller a match.

17.   Luke et al teach using weighting as is illustrated in figures 1a and 1b; i.e., any specified criteria of

a sale or purchase requirement of a seller or buyer is inherently weighted. Using a bipartite graph as a

method of determining matches is also considered old and well known; some examples are taught by

Buss et al. Therefore, it is considered that it would have been obvious to one of ordinary skill in the art at

the time of the invention to utilize a bipartite graph for the purpose of matching buyers with sellers as this

type of graph is thought to be very useful for problems involving "matching" pairs. See Buss et al, column

1, lines 1- 29.

          Re claim 2: Luke discloses that each buyer is associated with at most one maximal weighted

matching bid and each seller is associated with at most one maximal weighted matching bid (FIG. 2).

          Re claim 3: Luke discloses that said selecting the highest surplus pair of bids between each

buyer and each seller includes determining a value associated with each bid of a buyer and each bid

of a seller (FIG. 2).

          Re claim 5: Luke discloses that the step of collecting at least one multi-attribute bid from one or

more buyers and at least one multi-attribute bid from one or more sellers, each bid having a plurality of

attributes specified by a buyer or seller (col. 4, lines 26-45; col. 6, lines 39-44).

          Re claim 6: Luke discloses that each bid has at least one predetermined attribute (i.e.,

quantity, price, or logistics information).

          Re claim 7: Luke discloses that said plurality of attributes are specified relative to a

uniform measurement unit (col. 5, lines 32-36 and 60-66).

          Re claim 10: Luke discloses that said selecting the highest surplus pair of bids between each

buyer and each seller includes determining a difference between the price of each buyer bid and the

price of each seller bid (from col. 7, line 26 to col. 8, line 20).

          Re claim 11: Luke (see FIGS. 1b and 2-2E) discloses that each bid has a plurality of attributes,

at least a portion of the attributes being specified by a buyer or seller and wherein said determining the

highest value pair of bids between each buyer and each seller further includes: generating bids for each

buyer from the plurality of attributes; generating bids for each seller from the plurality of attributes;

comparing attributes of each bid of each buyer with attributes of each bid of each seller.

Re claim 12: Luke (see FIGS. 1b and 2-2E) discloses that said determining the highest value pair

of bids between each buyer and each seller further includes generating a list of matching bids between

each buyer and each seller, each matching bid having compatible attributes.

Re claim 13: Luke (see FIGS. 1b and 2-2E) discloses that said highest surplus pair of bids

between each buyer and each seller is selected from said list of matching bids.

Re claim 14: Luke (see FIG. 2C) discloses that said compatible attributes include a buyer price

lower than or equal to a seller price.

Re claim 15: Luke (see FIG. 2E) discloses that said generating the list includes discarding pairs

of bids between each buyer and each seller where a buyer price is lower than a seller price.

Re claim 4: Luke does not explicitly disclose a dynamic trading method having a step of selecting

a pair of compatible-bids between each buyer and each seller, the pair of bids having a highest difference

in bid values. However, in Fig. 1b and col. 6, lines 26-35 thereof, Luke discloses that the trading would

happen at any point (i.e., from lowest difference in bid values to highest difference in bid values) in the

shaded polyhedron 40 (i.e., a pair of compatible bids between each buyer and each seller). Thus, it would

have been obvious design choice to employ any selecting steps including the claimed step for the

claimed method as desired. See also the discussion of claim 1 above.

Re claim 18: Luke (see Figs. 1a and 1b) further discloses that said selecting the highest

difference pair of bids includes determining a bid value associated with each bid of a buyer and each

bid of a seller.

Re claim 19: Luke (see Figs. 1a and 1b) further discloses that said collecting the multi-

attribute bid values include collecting a set of nominal attribute values, including a nominal bid value.

Re claim 21: Luke (see Figs. 1a and 1b) further discloses that said generating the multiattribute

bids include determining the bid value for each combination of attribute values for each buyer and each

seller.

Re claim 22: Luke further discloses that said bid value and said variances to the bid value are specified in a uniform measurement unit (col. 5, lines 32-36 and 60-66).

Re claims 8 and 23: Luke does not explicitly disclose that said uniform measurement unit is a monetary unit. However, it is well-known practice to convert a plurality of attributes to a monetary unit (e.g., converting a delivery destination to a monetary unit based on a distance or a payment date to a monetary unit based on an interest rate) to more accurately define the actual price of purchasing products and it would have been within the level of ordinary skill in the art to employ a monetary unit as a uniform measurement unit to facilitate the process of selecting a pair of bids between each buyer and each seller for the claimed method.

Re claim 24: Luke (see FIGS. 1-lb) discloses a method of generating multi-attribute bids, comprising:

18.   collecting at least one set of multi-attribute bid values, each set of multi-attribute bid values having a set of nominal attribute values including a nominal bid value, said collecting also includes collecting at least one variance to the nominal attribute value of at least one attribute and a corresponding variance relative to said nominal bid value; and generating a set of bids for each set of multi-attribute bid values, each bid having a different combination of attribute values based on corresponding variances and nominal attribute values.

19.   Luke does not explicitly disclose the step of generating a bid value for each bid based upon the combination of attribute values. However, Buss discloses the use of a bipartite graph (Need to calculate a certain value that is used to find a point on a graph) for matching objects of one subset with objects of a different subset where multiple choices are permitted to provide a more efficient and faster process (col. 2, lines 14-21). Thus, it would have been within the level of ordinary skill in the art to modify the method of Luke by adopting the teaching of Buss to provide better efficiency and faster speed to the claimed method. Further, to use bipartite matching method as taught by Buss, a bid value for each bid based upon the combination of attribute values must be generated.

Re claim 25: Luke (see FIGS. 1a and 1b) further discloses that said collecting includes collecting at least one set of multi-attribute bid values from a buyer and collecting at least one set of multi-attribute bid values from a seller, the buyer and seller having a same set of attributes.

Re claim 26: Luke (see FIGS. 1a and 1b) further discloses that at least one attribute of said same set of attributes is selected from the group consisting of a predetermined buyer attribute and a predetermined seller attribute.

Re claim 27: Luke (see FIG. 2E) further discloses that said collecting includes collecting a bid value limit selected from the group consisting of a minimum bid value and a maximum bid value, said method further comprising discarding bids from said set of bids having a bid value outside of the bid value limit.

Re claims 28, 29 and 30: Luke discloses that the method of his is a computer-implemented method. Further, as stated supra, the claimed method would have been obvious to one of ordinary skill in the art and the claimed computer program product would also have been obvious to one of ordinary skill in the art to practice the claimed method.

20.   Examiner has pointed out particular references contained in the prior arts of record in the body of this action for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the response, to consider fully the entire references as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior arts or disclosed by the examiner.

Conclusion

21.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

22.   A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from

the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date

of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH**

shortened statutory period, then the shortened statutory period will expire on the date the advisory action

is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than **SIX**

MONTHS from the mailing date of this final action.

23.   Any inquiry concerning this communication or earlier communications from the examiner should

be directed to Kambiz Abdi whose telephone number is (703) 305-3364. The examiner can normally be

reached on 9:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, James P. Trammell can be reached on (703) 305-9768.

24.   Any inquiry of a general nature or relating to the status of this application or proceeding should be

directed to the Receptionist whose telephone number is (703)308-1113.

Any response to this action should be mailed to:

> **Commissioner of Patents and Trademarks**
> **Washington D.C. 20231**

or faxed to:

(703) 872-9306 [Official communications; including After Final communications labeled "Box AF"]

(703) 746-7749 [Informal/Draft communications, labeled "PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to:

> **Crystal Park 5, 2451 Crystal Drive**
> **7th floor receptionist, Arlington, VA, 22202**

Abdi/K
February 20, 2004

JAMES P. TRAMMELL
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